

## ABSTRACT OF THE DISCLOSURE

A DNA vaccine for the treatment of prostate cancer, comprising a plasmid vector comprising a nucleotide sequence encoding prostatic acid phosphatase (PAP) operably linked to a transcription regulatory element, wherein upon administration to a mammal a cytotoxic immune reaction against cells expressing PAP is induced. In preferred embodiment, the PAP encoded is a xenoantigen highly homologous to the autoantigen PAP of the mammal. Also disclosed are methods for inducing prostatitis, or inducing immune reaction to PAP, or treating prostate cancer in a mammal, using the DNA vaccine and pharmaceutical compositions comprising the vaccine. Preferably, xenoantigen vaccination is followed by boosting with autoantigen PAP from the same animal species as the mammal being treated.